WITK

The Spark Gap

JANUARY 1983

BOOK VIII VOL I

Official Journal of the Wellesley Amateur Radio Society

MESSAGE FAIR

by Nels Anderson, K1UR

The 1982 version of the Natick Mall Message Fair was held from December 15 through December 19 and was once again a success. Under the direction of Erik Thoresen, K1OGF, the operation was very smooth, and we generated more publicity than ever before. Announcements of our operation were made in several local newspapers and on several radio stations. In addition, we appeared in a segment on the WCVB Channel 5 11:00 p.m. news on Friday in which anchorperson Natalie Jacobson interviewed Erik and several of the people sending messages.

We had our usual fine exhibits including a new one this year. Mort Cohan, KA1IU, recently purchased a slow scan television (SSTV) set up and was there most of the days demonstrating it. He received many fine pictures from all over the U.S. and several foreign countries. The unit he has is also capable of a high resolution SSTV mode which gives pictures almost identical to broadcast TV. He contacted a number of stations who also had this mode, and the results were very impressive. In addition, we had many of the signs we used in the past plus some new ones including a large four by eight foot sign hanging from the roof. We also had the RTTY set up once again and although we did not use it for transmitting, the noise it makes receiving usually managed to attract attention.

Our business seemed to start off slowly, but we ended up with 925 messages originated, which is more than last year for the same number of days operating. This was certainly sufficient to keep the traffic nets busy. We would like to thank the many traffic handlers who helped pass all these messages and especially Jim Hatherley, WA1TBY, who in his role of Section Traffic Manager helped to organize the other operators as well as taking a large amount of traffic himself.

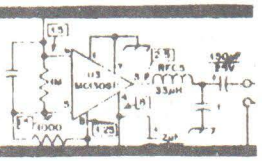
MEETINGS THIS MONTH:

January 6, 1983, at 7:30 p.m.
January 20, 1983, at 7:30 p.m.
Intermediate Bldg., Wellesley Hills, Mass.

ANNOUNCEMENT

Your editor has moved. Anyone wishing to submit any material for the Spark Gap such as items for sale, news items, or even an article (!) please mail them to Nels Anderson, K1UR, 92 Bishop Drive, Framingham, Mass. 01701. The new number is 872-5259.

Tek Tok



--Virginia Star
George Parsons, WB4BAB, ed.
via ARNS

For you antenna buffs: Aside from physical damage, the most common fault in the antenna system is low resistance to ground. Moisture in the antenna system (i.e. impedance matching networks, coax cables, etc.), dirty insulators and coax dialectric breakdown all cause varying degrees of shunting resistance and must be guarded against if maximum efficiency is to be expected. Testing is accomplished by using a megger or if one is not handy, a simple ohm meter will suffice.

Theoretically, any transmission line system should read infinity on the megger, but this reading is not always possible to obtain. Abrupt changes in the weather, high humidity, or other natural causes often result in low resistance readings. Often resistances may be raised by cleaning the insulators. The coax cables and other cables and fittings used to connect the equipment should also be tested. A check of continuity of the antenna/transmission line system should be made periodically. The following values are suggested.

1. A resistance of 200 megohms or more to ground indicates that the antenna sytem is in good condition.

2. A resistance of 5 to 200 megohms to ground indicates the insulators need cleaning or the coax is contaminated with water.

3. A resistance of less than megohms to ground indicates that the antenna system is in bad shape and an urgent need exists to locate the low resistance point and correct it.

OFFICIAL BULLETIN

Number 106, dated November 23, 1982:

Thirty meter band users are reminded that only the frequencies 10.100 to 10.109 and 10.115 to 10.150 MHz in that band are available to the Amateur Service in the U.S. Violators believed by FCC to be repeatedly or willfully using the frequencies 10.109 to 10.115 MHz are now being fined by the Commission. During the previous three weeks or so, FCC has warned violators with advisory notices or phone calls. However, the Commission has now received an official complaint of interference from the government service which uses 10.109 to 10.115 MHz and accordingly has escalated its response. Thirty meter users are further reminded that the entire assignment is temporary and is available on the basis of no interference being caused to stations in the Fixed Service. Only A1 and F1 emissions are permitted and power is limited to 250 watts input by General, Advanced or Extra Class license holders only.

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The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

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THE "SPARK GAP" IS A MONTHLY PUBLICATION OF THE WELLESLEY AMATEUR RADIO SOCIETY. ITS PRIMARY PURPOSE IS TO KEEP ITS MEMBERS ABREAST OF CURRENT HAPPENINGS, FCC RULES AND REGULATIONS CHANGES, AND TO LIST EQUIPMENT OFFERED FOR SALE OR TRADE BY MEMBERS. MEMBERS ARE ENCOURAGED TO CONTRIBUTE TO THE "SPARK GAP" AND MAY SEND THEIR ARTICLES TO THE EDITOR.

THE WELLESLEY AMATEUR RADIO SOCIETY IS A NON-PROFIT ORGANIZATION DEDICATED TO THE PROMOTION OF AMATEUR RADIO THROUGH INSTRUCTION, FELLOWSHIP, DEMONSTRATION, AND ENCOURAGEMENT OF PARTICIPATION. ANNUAL MEMBERSHIP IN THE SOCIETY IS $8.00. THE CLUB YEAR RUNS SEPTEMBER 1 TO AUGUST 31. AMATEUR NOVICE AND GENERAL CLASSES ARE CONDUCTED REGULARLY AT NO COST. TO ENROLL IN A CLASS, OR GAIN INFORMATION ABOUT THE SOCIETY IN GENERAL, WRITE:

THE WELLESLEY AMATEUR RADIO SOCIETY
324 WASHINGTON STREET
WELLESLEY HILLS, MASS. 02181

NEW ENGLAND REPORT

The OSCAR Phase III-B launch will occur April 2, 1983. There was speculation that the L6 payload (containing AMSAT's OSCAR Phase III-B) might be launched as early as mid February, but the European Space Agency analyzed the fuel pump failure of the third stage of L5 and decided to disassemble the L6 booster to run more stringent tests on it. The April date should allow AMSAT more time to improve Phase III-B's ailing 1269 MHz L-band transponder. Thanks KA1M.

New England Report, November 15, 1982

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Amateur Radio is no longer excluded from proposed regulations governing exposure to non-ionizing radiation in Massachusetts. While the initial draft of the regulations from the Massachusetts Department of Public Health's Radiation Control Program specifically excluded Amateur Radio from all sections, the second draft exempts Amateurs from the registration requirements only. This means that ham radio operators, unlike operators in other radio services, would not be required to notify and receive prior approval from the Department of Health before establishing a station.

What impact the proposed regulations will have upon Amateur Radio in Massachusetts is not yet fully known but the ARRL Biological Effects Committee members are currently studying the standard and their comments are expected to reach Headquarters by November 22.

New England Report, November 15, 1982

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Limited use of the 18 and 24 MHz bands was granted to British Amateurs on October 1st. CW operation only with 10 watts was authorized between 18.068 and 18.168 MHz, and 24.890 to 24.990 MHz. Signals must not, of course, interfere with other radio services. There is one unusual restriction: only horizontally polarized antennas with gains of zero db with respect to a half wave dipole may be used.

New England Report, December 15, 1982

MINUTES

Meeting of November 18, 1982:

The meeting was opened at 7:38 p.m. by President David Curry, K1TK, with about ten present.

The treasurer's report was given.

It was announced that a letter of thanks had been received from the parade committee for our help with the Wellesley Veteran's Parade.

The Natick Mall Message Fair was discussed. Our arrangements with the mall are all set.

The meeting was closed at 8:05 p.m.

It Seems to Me...

by Nels Anderson, K1UR

The December issue of QST announced the long discussed requirements for the ARRL's "Special Service Club". I have always thought of the Wellesley Amateur Radio Society as "special". After all, we offer more activities to our members than any other club I know of in Eastern Massachusetts. This program would seem to open up another opportunity for us.

First of all, there are a number of qualifications to be met before a club can be certified as a Special Service Club. Do we qualify? Let's see. The first requirement is public relations. That's easy, the Natick Mall Message Fair certainly is a terrific public relations program. Not only do we meet hundreds of people who actually send messages, several times that many at least see Amateur Radio set up in front of them, and last year many thousand saw us on the Channel 5 News. No problem there.

The second requirement is emergency communications. Well, that's what Field Day is for, right? We have also held Simulated Emergency Tests and, really, some of the public service events we stage provide emergency training as controlled net operation and traffic handling are used. Again, no problem.

The third requirement is training. We've just completed a successful General Class and are about to start a Novice Class. We've had classes for one license or another every year for many years now. It certainly seems that we meet this requirement.

The fourth requirement is technical achievement. How are we as a club expected to make some technical breakthrough? Well, we're not, but this requirement suggests that some technical activity take place in addition to the other club activities. We actually meet this requirement rather well Our VHF and UHF contest activities have given the participants a chance to build, experiment, and operate with equipment on our highest bands, some of which are little used and can certainly be classified as experimental. Besides our contest activities, we usually have several talks each year on technical subjects and have a library containing many reference books as well as many past issues of several of the Amateur Radio magazines. The definition of this requirement is less clear cut than the first three, but I think we still meet it easily.

The last two categories are very flexible so as to give local conditions consideration when deciding if a club qualifies or not. Requirement five is other operating activities. During a normal year we take part in several on the air contests, which have included VHF and UHF contests, Field Day, Sweepstakes, and the Massachusetts QSO Party. We have many public service activities that requir operating. We also sponsor a repeate to provide enhanced local communications. It would seem we do more than enough to meet this requirement.

The last category is miscellaneous activities. Some of the things suggested are maintaining a permanent club address, passing on ARRL bulletins to club members, running a newsletter, monthly meetings, and a brochure on Amateur Radio activities in our local area. They suggest that a club should have three such activities and since we have all five of the above plus others such as our flea market and auction, it would seem that we have meet all requirements.

So, now that we qualify without even having to add anything to our current program, the real question is do we want to become a Special Service Club? In other words, what does it do for us? Well, the QST article is a little vague on this, but the main thing that would be provided is extr help from ARRL beyond what a norma affiliated club receives, especially

the area of recognition. They uld endeavor to make us the first club in the area that a new or prospective Amateur would be referred to and would in general help publicize our existance. Despite our many activities there are hams in the local area who don't know we're around and some of them would probably like to become members if only they knew. For any club to continue going, especially with the high standards that W.A.R.S. maintains, new blood is necessary so if this program would help us attract new members it would be a great help. Some of our activities have been hurt by a lack of people able to participate; in fact over the last year or so we have turned down more public service activities than we have accepted, and in some of our bigger activities like the Boston Marathon, we have had to rely heavily on non club members. A bigger pool of club members would be a help.

Another event now taking place ıld also shape the future meaning of the Special Service Club. The FCC deregulation of the Amateur examination procedures could result in all volunteer examiners in the near future, with the organization provided on the national level by the ARRL, and on the local level by the Special Service Clubs. Although this is speculation at this time, there is a feeling that this is the real reason for creation of the Special Service Club. Should this all come true, and it certainly seems that some change to the examination procedures will occur, the question is do we want to become involved? If we did, this would be one of the best ways that our club could serve the needs of Amateur Radio in the area. This would also mean that <u>every</u> new ham in the area would at least know of the existance of the club, and this certainly would be the best possible recruitment tool.

It would seem that the Special Serce Club program could indeed do something for us and since we already seemingly meet the requirements, no additional work would be involved. It seems to me that we should seriously consider joining this program when it officially opens up March 1. Please let your officers know what you think about this very important program.

CHUCKLE KORNER

WATT IS ELECTRICITY?

from <u>Amateur Radio</u>
Wireless Inst. of Australia
via ARNS

Electricity is a colorless odorless gas which burns with a bright flame.

Light grows from a bulb.

An Amp is a little animal that crawls along a wire. An Amp lives in an Ohm. In summer an Amp lives in a Coloumb. Polarization is the changing of an Ohm into a Coloumb.

An Ammeter is an animal that eats Amps.

A Battery fires Amps round a Circuit. An Amp rides round the Circuit on a Megacycle. Megacycles are parked on a Grid. Flemming's Right Hand Rule states that: All Amps must ride their Megacycles on the right hand side of the wire. A Charge occurs when all the Amps run down the Circuit at the same time. All Amps meet in an Accumulator.

An Oerstad is an Ohmstead for orses.

A Joule is a fight between two Amps. You receive a shock when an Amp isn't wearing any shoes.

THE WESTLINK REPORT
THE AMATEUR RADIO NEWSLETTER

ISKRA 3 is in orbit. The Russian news agency TASS reported that ISKRA 3 had been orbited from the Solyut 7 space station on November 18, 1982. Like the ill-fated ISKRA 2, this satellite is believed to carry a 15 meter to 10 meter transponder, though such a unit is not in service at this time.

Westlink Report, November 19, 1982

VHF CONTEST

by Jeff Duquette, K1BE

So you bought that all-mode, all band super wiz-bang radio and you only use it on repeaters! Get all those circuits humming and try out the VHF Sweepstakes! Late in the contest is an especially good time because they'll strain their ears to work you. Desperation has set in and they'll try til they pull you out of the muck.

How far away can you expect to work stations? This depends on various factors. SSB/CW or FM propagation occur many different ways on VHF. Tropospheric bending occurs when a warm air mass overruns a cold air mass. An inversion occurs, and DX opens up to a surprising distance. Check the morning newspaper and evening news shows for a high pressure area overtaking a low pressure area, or for occluded fronts. Aim your antennas along the trailing edge and hear stations in a wide coverage area.

Sporadic E skip occurs when intense patches of ionization appear. Solar flares produce these and can be very strong. Listen to W1AW and WWV for the solar index or news of a solar flare. Or if you start hearing foreign calls 599++ on six meters, suspect an opening. F layer openings can also be spectacular and maybe we can expect one this year.

If a strange fluttering cw signal or barely intelligible Donald Duck sounds on voice are heard, look out the window for an aurora. Point the beam North for the thrill of bouncing signals off the Aurora Borealis or Northern Lights. QSO's to Washington state from Massachusetts are possible. A 59A report means the strange fluttery sound of auroral propagation. Once heard it's not forgotten.

Transequitorial propagation occurs along the North/South line of the sun. Did you ever think you'd work South America on six meters? It's a possibility. Tropospheric scatter on two meter cw can go over 500 miles. Signals are fluttery and weak, but what some people won't do for a multiplier.

Meteor scatter during the Sweepstakes is mostly for experienced operators. The Cygnids meteor shower is on January 17th. Quick signaling with high-speed cw, good antennas and receivers help. If the band's dead why not give it a try? EME or moonbounce also is possible, but usually are too much for the average op.

Beam antennas work best, but every contest some station with one watt and a whip antenna works over 100 QSO's. Always keep in mind, they want you, and you're doing them a big favor. The "them's" have the beams and the high-priced equipment, so get on and see how far that signal can get.

Also remember that even without any band opening, there are plenty of people to work in the New England area on ground wave. If you have a beam be sure to point it in all directions. During VHF Sweepstakes, there is an especially large and active group in Western Massachusetts, so be sure to point out there. Even if you only have two meter FM, try some of the simplex frequencies and see if you can work some of the mountain-top stations.

THE WESTLINK REPORT
THE AMATEUR RADIO NEWSLETTER

Two important rules change proposals have been assigned Docket numbers. The "no-mailback Novice" proposal, which would place the burden of both the CW and theory test development on the volunteer examiner has been assigned the designation 82-727 and carries a commentary cutoff date of February 15, 1983. The "logging revision" proposal, which would do away with most of the current logging requirements, has been assigned Docket number 82-726; comments on it are due before January 14, 1983.

RM-4229 was assigned to the ARRL petition for rule making aimed a implementing the section of PL 97-25 which deals with new Amateur exam pro-

dures. The plan calls for at least examiners to administer a test, with Extra Class holders required for testing Advanced Class applicants. They also favor such safeguards to testing integrity as spot checks by FCC monitors and a pool of random questions from which the exact test for a given applicant's exam would be selected. See June OST for more.

Westlink Report, November 19, 1982

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CB expansion is dead, and this time it was the FCC that "slew it." The Commission acted on October 21 to deny three petitions which were aimed at expanding the present 27 MHz Class D allocation, and/or expanding overall CB operation into 220 MHz and 900 MHz bands. The "Personal Radio Operators International Federation" wanted to restructure CB into four distinct sub-services including a "hobby type" 27 MHz SSB-only allocation. CB Magazine had petitioned for expanded B-only operation above the current .405 MHz high end of the 11 meter band, while the Washington State CB Radio Association wanted to create a "Hobbyist Class" of Amateur Radio license for operation on SSB in the same spectrum. The Commission denied all three, citing the portential for increased RFI/TVI as well as making it harder for the FCC to enforce regulations in the CB Service. Also noted was the shrinking number of operators in the service, lessening the channel loading problem. With this action, any form of CB expansion appears dead for the forseeable future.

Westlink Report, November 19, 1982

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In the FCC hopper for release later this year or early 1983 are a number of proposed changes to the overall scope of personal radio. These include rule making notices for the establishment of a new 900 MHz Personal Radio Service, the delicensing of e Citizens Radio Service and the nding over of the Amateur Radio examination program to outside volunteers. The ARRL has already filed a request on this last item (RM 4229) and will shortly file comments on it.

Westlink Report, December 3, 1982

NEW CLUB MEMBERS

The following two people recently joined the club: Michael Kiron, N1CGF, of Newton; and Allan Bacon, K1BA, of Hingham. Welcome to both of you and we hope you both take advantage of the many things the Wellesley Amateur Radio Society has to offer.

education corner

The last meeting of the General Class was held December 15. Most of the original starters stuck with the entire class and have hopefully either gone in for the FCC exam or at least signed up by now. No word yet of who if anyone has upgraded.

As planned, we are starting a new Novice Class this month. It will be taught by Art Thompson, KA1ENP, and Ken McNair, KA1ACX, and will be held at 7:00 p.m. on Tuesday nights at the club, starting January 11. If you know of anyone who would be interested in the class, please send them down to the club on the 11th or for more information, contact Art Thompson at 235-5509.

ANNOUNCEMENT

At press time, it's unknown what W1TKZ will be doing for the January VHF Sweepstakes. The past few years we have operated from W1YK at Worcester Polytechnic Institute but due to graduation, we no longer questions from which the exact test for a given ap have the contacts there we used to. Hopefully, we will come up with something. If anyone operates from home, don't forget there is a club entry category as well as an individual category, so mark your summary sheet with Wellesley Amateur Radio Society under the club entry.

The Spark Gap

WELLESLEY
AMATEUR RADIO
SOCIETY

324 Washington Street
Wellesley Hills, Massachusetts 02181

FIRST CLASS MAIL

HAPPY NEW YEAR!